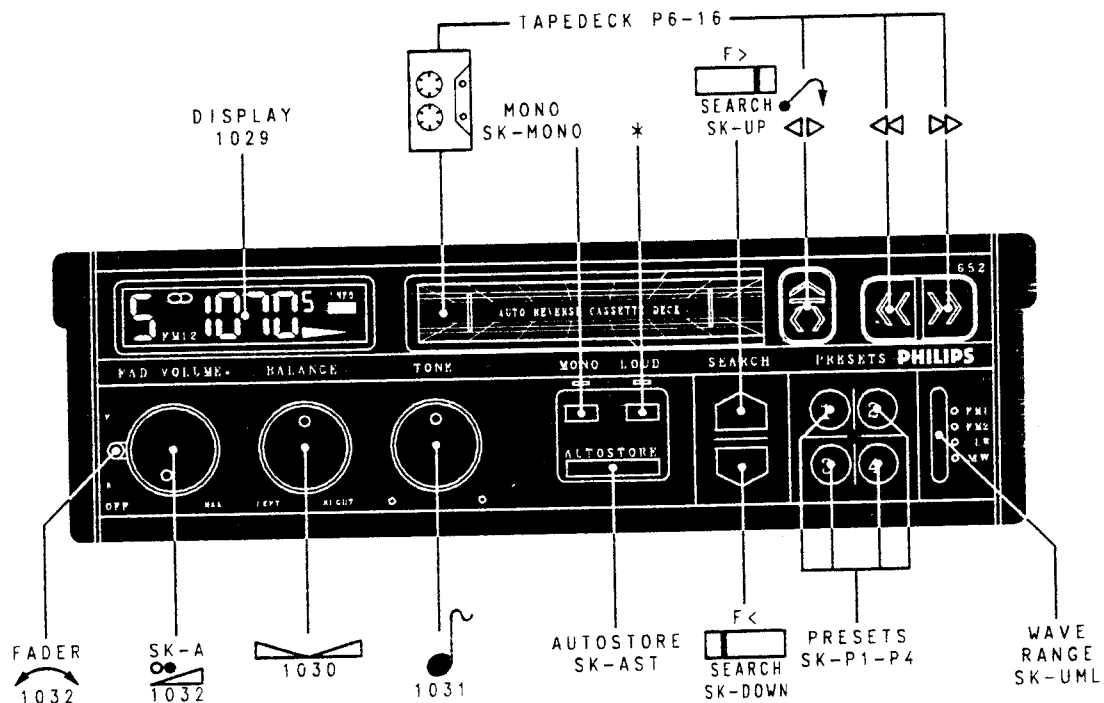


Service Service Service

For repair information of the cassette deck see Service Manual of Auto Cassette deck P6-16

Service Manual

12 V 



* =SK-LOUD DC652
SK-INFO DC656



NL

GB

F

Subject to modification
4822 725 22467

D

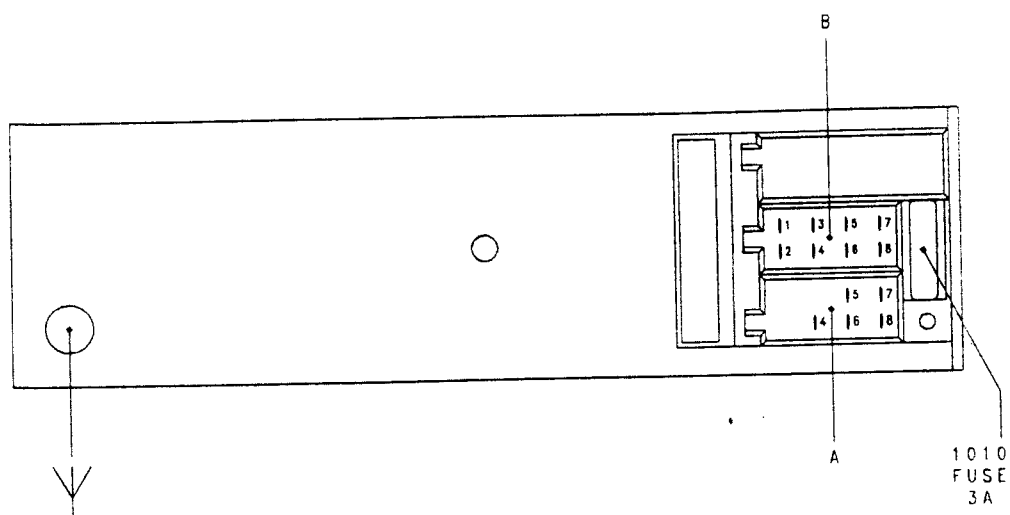
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PHILIPS

Published by
Service Consumer Electronics



CONNECTIONS OF BLOCK

A4 : + 14,4V DC PERMANENT
 A5 : AUTOM. AERIAL
 A6 : N. C.
 A7 : + 14,4V DC SWITCHED
 A8 : GROUND

B1 : REAR RIGHT
 B2 : GROUND
 B3 : FRONT RIGHT

B5 : FRONT LEFT
 B6 : GROUND
 B7 : REAR LEFT

GB TECHNICAL DATA

GENERAL

Power supply : 14.4V DC
Dimensions : 180x51x150 mm

RADIO

LW : 144-288 KHz
MW : 531-1611 KHz
FM : 87.5-108 MHz
IF-AM : 10.7 MHz
IF-FM : 10.7 MHz
Sensitivity 26 dB S/R : 160 μ V (LW)
: 110 μ V (MW)
: 110 μ V (MW)
: 4 μ V (FM)
Limitation a-3 dB : 15 μ V
10 dB crosstalk : 150 μ V

CASSETTE

Number of tracks : 2x2
Tape speed : 4.76 cm/sec.
Wow and flutter : $\leq 0,35$ %
Crosstalk : ≥ 30 dB

AMPLIFIER

Output power : 4x3.8W ± 1 dB/4 Ω
(D $\leq 10\%$) : 2x5W ± 1 dB/4 Ω
Loudness : +6dB at 125 Hz
: +1dB at 1 kHz
Tone control : +4/-12 dB at 10 kHz

NL TECHNISCHE GEGEVENS

ALGEMEEN

Voedingsspanning : 14,4V, gelijkspanning
Afmetingen : 180x51x150mm

RADIO

LG : 144-288 kHz
MG : 531-1611 kHz
FM : 87,5-108 MHz
MF-HM : 10,7 MHz
MF-FM : 10,7 MHz
Gevoeligheid bij 26 dB S/R : 160 μ V (LG)
: 110 μ V (MG)
: 110 μ V (MG)
: 4 μ V (FM)
Begrenzing a-3dB : 15 μ V
10 dB overspraak : 150 μ V

CASSETTESPELER

Aantal sporen : 2x2
Bandsnelheid : 4,76 cm/sec.
Wow & Flutter : $\leq 0,35\%$
Overspraak : ≥ 30 dB

VERSTERKER

Uitgangsvermogen : 4x3,8W ± 1 dB/4 Ω
(D $\leq 10\%$) : 2x5W ± 1 dB/4 Ω
Loudness : +6dB bij 125 Hz
(fysiologische correctie) : +1dB bij 1 kHz
Toonregeling : +4/-12 dB bij 10 kHz

D TECHNISCHE DATEN

ALLGEMEIN

Speisespannung : 14,4 V DC
Abmessungen (BxHxT) : 180 x 51 x 150 mm

RADIOTEIL

LW : 144-288 kHz
MW : 531-1611 kHz
UKW : 87,5-108 MHz
ZF/AM : 10,7 MHz
ZF/FM : 10,7 MHz
Empfindlichkeit bei 26 dB S/R : 160 μ V (LW)
: 110 μ V (MW)
: 110 μ V (MW)
: 4 μ V (UKW)
: 15 μ V
Begrenzung a-3 dB : 15 μ V
10 dB Übersprechdämpfung : 150 μ V

CASSETTENTEIL

Anzahl der Spuren : 2 x 2
Bandgeschwindigkeit : 4,76 cm/sec
Gleichlaufschwankungen : $\leq 0,35$ %
Übersprechdämpfung : ≥ 30 dB

VERSTÄRKER

Ausgangsleistung : 4 x 3,8 W ± 1 dB/4 Ω
(D ≤ 10 %) : 4 x 3,8 W ± 1 dB/4 Ω
Gehörrichtige : +6 dB bei 125 Hz
Lautstärkeregelung : +1 dB bei 1 kHz
: +4/-12 dB bei 10 kHz
Klangregelung : +4/-12 dB bei 10 kHz

I CARATTERISTICHE TECNICHE

GENERALITA

Tensione d'alimentazione : 14,4V CC
Dimensione : 180x51x150 mm

RADIO

v.o.
Sensibilità a 26 dB S/B : 160 μ V (GO)
: 110 μ V (PO)
: 110 μ V (PO)
: 4 μ V (FM)
Soglia a a-3dB : 15 μ V
10 dB crosstalk : 150 μ V

RIPRODUTTORE DI CASSETTE

numero di piste : 2x2
Velocità d'avanzamento : 4,76 cm/s.
Wow e flutter : $\leq 0,35\%$
Crosstalk : ≥ 30 dB

AMPLIFICATORE

Potenza d'uscita : 4x3,8W ± 1 dB
(D $\leq 10\%$) : v.o.
Volume : v.o.
Equalizzazione : v.o.

F CARACTERISTIQUES TECHNIQUES

GENERALITES

Tension d'alimentation : 14,4V DC
Dimensions : 180x51x150mm

RADIO

GO : 144-288 kHz
PO : 531-1611 kHz
FM : 87,5-108 MHz
FI-AM : 10,7 MHz
FI-FM : 10,7 MHz
Sensibilité à 26 dB S/B : 40 μ V (GO)
: 30 μ V (PO)
: 6 μ V (FM)
Point limite a-3dB : 15 μ V
10 dB diaphonie : 70 à 200 μ V

CASSETTE

Nombre de pistes : 2x2
Vitesse de défilement : 4,76 cm/sec.
Pleurage et scintillement : $\leq 0,35$ %
Diaphonie : ≥ 30 dB

AMPLIFICATEUR

Puissance de sortie : 4x3,8W ± 1 dB/4 Ω
(D $\leq 10\%$) : 2x5W ± 1 dB/4 Ω
Loudness : + 6 dB à 125 Hz
(correction phys.) : + 1 dB à 1 kHz
Régulation tonalité : + 4/-12 dB à 10 kHz

GB SERVICE TEST PROGRAMME

µC test

This test is called by turning the set on while pressing keys **1 and 2** at the same time. Besides the RAM, a great number of µC instructions are tested. If no faults occur, a special pattern will be displayed (see fig. 1F). The test can be stopped by turning off the set.

Display test

This test is called by turning on the set while **simultaneously** pressing keys **1 and 3**. A number of easily recognizable patterns will be displayed in succession (see figs. 1a thru 1h). If you want to make one of the patterns visible for a longer time, you only have to keep pressed key **1** for the required time. The test can be stopped by turning off the set.

Preprogrammed frequencies

To facilitate adjustment, a number of preprogrammed frequencies occur on each wave range. These frequencies can be "called" as follows: Put the set out of action, press key P1+4 and put the set into operation. Depending on the wave range, and the keys P1+4 selected, the frequencies from the table in figure 1 will be displayed.

F PROGRAMME DE TEST SERVICE

Test du µC

Ce test est appelé en mettant l'appareil en marche et en pressant en même temps les touches **1 et 2**. Un grand nombre d'instructions au µC sont testées outre à la RAM. S'il n'y a pas d'erreurs constatées, une mire spéciale apparaît à l'afficheur (voir fig. 1F). Il est mis fin au test par la mise hors circuit de l'appareil.

Test de l'afficheur

Ce test est appelé par la mise en marche de l'appareil ainsi que par la pression **simultanée** des touches **1 et 3**. Un certain nombre de mires simples et se succèdent alors à l'écran (voir aux fig. de 1a à 1h). Si vous désirez voir une des mires particulier et pour un plus long moment, il suffit de presser la touche **1** pendant le moment voulu. Il est mis fin au test par la mise hors circuit de l'appareil.

Fréquences préprogrammées

Afin de faciliter l'ajustage, un certain nombre de fréquences préprogrammées figurent sur chaque gamme d'onde. Celles-ci sont "rappelables" comme suit: Mettre l'appareil hors service, presser la touche P1+4 et mettre l'appareil en service. Selon la gamme d'onde et les touches P1+4 choisies les fréquences du tableau de la fig. 1 pourront être affichées.

NL SERVICE TESTPROGRAMMA

Een µC-test

Deze test wordt opgeroepen door het apparaat in te schakelen en door tegelijkertijd de toetsen **1 en 2** in te drukken. Behalve de RAM wordt een groot aantal µC-instructies getest. Indien er geen fouten gevonden worden, verschijnt een speciaal patroon in de display (zie figuur 1a tot en met 1f). De test wordt gestopt door het uitschakelen van het apparaat.

Display-test

Deze test wordt opgeroepen door het apparaat in te schakelen en door **tegelijkertijd** de toetsen **1 en 3** in te drukken. Een aantal eenvoudige patronen verschijnt nu achtereenvolgens in de display. (Zie fig. 1a tot en met 1h). Indien u een van de patronen speciaal en langer wilt bekijken, hoeft u alleen maar gedurende de gewenste tijd toets **1** in te drukken. De test wordt gestopt door het apparaat uit te schakelen.

Voorgeprogrammeerde frequenties

Om de instelling te vergemakkelijken, telt elk golflengtegebied een aantal voorgeprogrammeerde frequenties. Deze kunnen als volgt worden opgeroepen: Het apparaat uitschakelen, op de toets **P1 + 4** drukken en het apparaat inschakelen. Al naargelang het golfbereik en de toetsen **P1 + 4** die u gekozen heeft, kunnen de frequenties uit figuur 1 in de display zichtbaar worden gemaakt.

I PROGRAMMA DI PROVA SERVIZIO

Prova di µC

La prova viene iniziata accendendo l'apparecchio e premendo contemporaneamente i tasti **1 e 2**. Oltre alla RAM viene verificato un gran numero di istruzioni al µC. Se non vengono rilevate anomalie, sul quadrante appare una mira speciale (v. fig. 1F). La prova viene terminata spegnendo l'apparecchio.

Prova del quadrante di visualizzazione

La prova viene iniziata accendendo l'apparecchio e premendo contemporaneamente i tasti **1 e 3**. Dopodiché sullo schermo appaiono in successione una serie di mire semplici (v. fig. da 1 a 14). Se si desidera vedere una

della mire in particolare e per un periodo più lungo, basta premere il tasto **1** al momento voluto. La prova viene terminata spegnendo l'apparecchio.

Frequenze preprogrammate

Al fine di facilitare la correzione, un certo numero di frequenze preprogrammate figurano su ciascuna gamma d'onda. Queste vengono attivate nel modo seguente: Spegner l'apparecchio, premere il tasto **P1+4** e accendere l'apparecchio. A seconda della gamma d'onda, e i tasti da **1 a 4**, potranno essere visualizzate le frequenze della tabella in fig. 1

	FM1	FM2	MW	
P1	87,5 MHz	93,15 MHz	990 KHz	141
P2	93 MHz		1566 KHz	162
P3	104 MHz		1611 KHz	
P4	108 MHz		1611 KHz	

Fig. 1

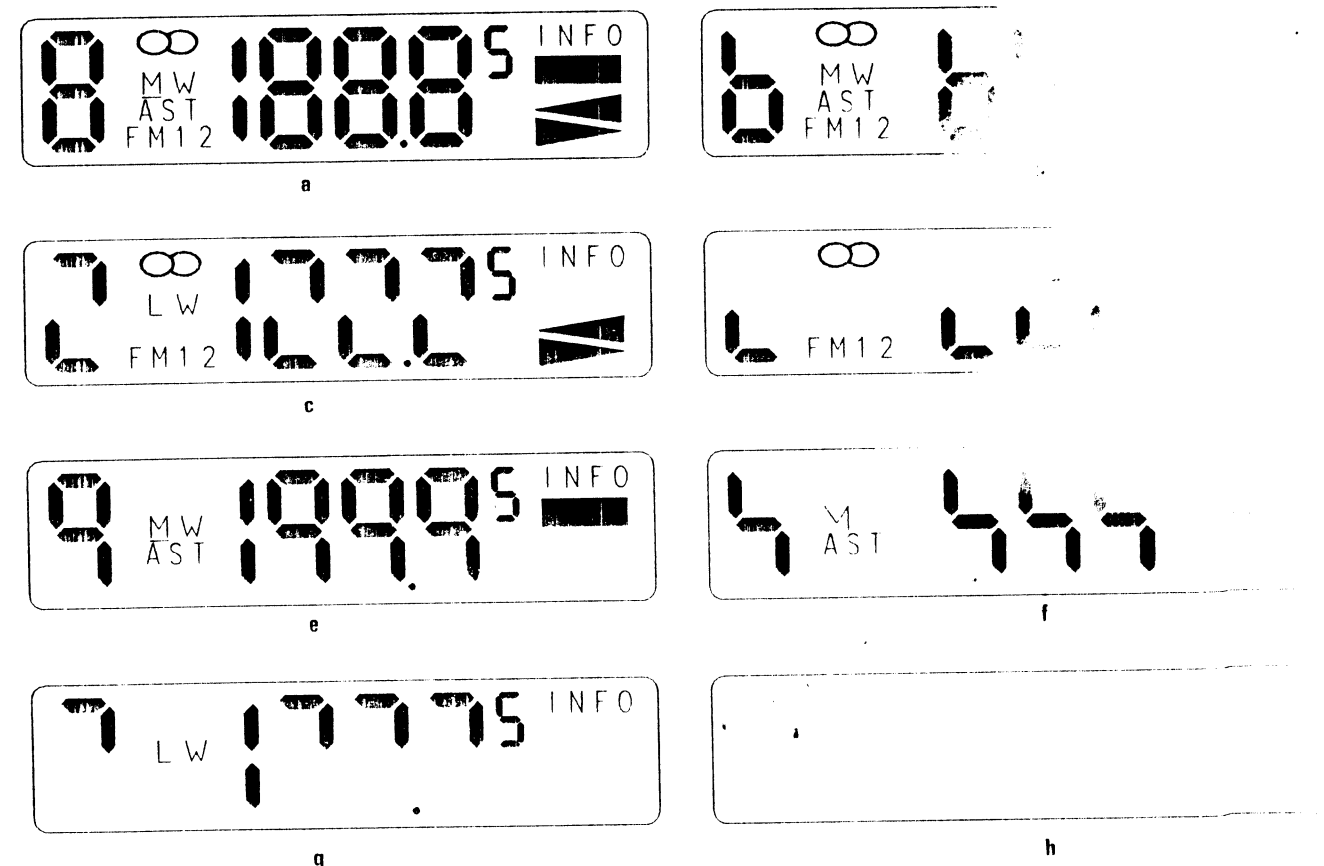


Fig. 2

D PRÜFPROGRAMM ZUR WARTUNG

µC-Prüfung

Das Programm zur µC-Prüfung wird durch Einschalten des Geräts und **gleichzeitiges** Drücken der Tasten **1 und 2** aufgerufen. Neben dem RAM wird eine große Anzahl von µC-Befehlen überprüft. Entdeckt das Programm keine Fehler, so erscheint im Display eine entsprechende Anzeige (s. Abb. 1f). Die Prüfung wird durch Ausschalten des Geräts beendet.

Display-Prüfung

Das Programm zur Display-Prüfung wird durch Einschalten des Geräts und **gleichzeitiges** Drücken der Tasten **1 und 3** aufgerufen. Auf dem Display wechseln sich mehrere einfache Anzeigen ab (s. Abb. 1a-h). Zum Festhalten einer Anzeige auf dem Display beim Erscheinen dieser Anzeige Taste **1** gedrückt halten. Die Prüfung wird durch Ausschalten des Geräts beendet.

Vorprogrammierte Frequenzen

Zur Vereinfachung der Abstimmung gibt es in jedem Wellenbereich eine Reihe von vorprogrammierten Frequenzen. Diese können folgendermaßen aufgerufen werden: Gerät ausschalten, Taste 1,2,3 oder 4 drücken, Gerät einschalten. Durch Wahl des Wellenbereichs und der Tasten 1-4 können so alle Frequenzen, die in der Tabelle von Abb. 1 dargestellt sind, auf dem Display aufgerufen werden.

...V
...V FM
...V AM
...V >
...V <
...V eject
...V >>
...V <<
any position
position FM
position AM
position play forward
position play reverse
position eject
FFWD
REW

6000 LA 1177

1 = 2.6 V FM
2 = 7.5 V FM
3 = 7.1 V FM
4 = 1.9 V FM
5 = GND
6 = 4.5 V FM
7 = 1.3 V FM
8 = 4.0 V FM
9 = 7.5 V FM

6001 TEA 6200

1 = 6.5 V AM
2 = 3.9 V AM
3 = 8.0 V
4 = 8.0 V
5 = 8.0 V
6 = 8.0 V
7 = 0.6 V
8 = 3.9 V AM
9 = 3.9 V AM
10 = GND
11 = 6.5 V AM
12 = 1.2 V
13 = 4.5 V AM
14 = 8.2 V AM
15 = 4.5 V AM
16 = 4.5 V AM
17 = GND
18 = 1.0 V AM
19 = 1.2 V AM
20 = 3.2 V AM

6002 TEA 6100

1 = 8.1 V
2 = 0.6 V
3 = 4.3 V signal MP-3
4 = N.C.
5 = MP-3
6 = 40 KHZ
7 = GND
8 = 8.0 V
9 = 5.0 V SCL
10 = 5.0 V SDA
11 = 3.6 V MP-5
12 = 4.4 V
13 = 4.4 V
14 = 2.0 V
15 = 3.6 V
16 = 2.8 V
17 = 2.8 V
18 = 2.8 V
19 = 2.8 V
20 = GND

6003 TSA 6057

1 = 4 MHZ
2 = 4 MHZ
3 = 4.8 V
4 = GND
5 = 1.8 V
6 = 1.8 V
7 = 1.8 V
8 = <0.8 V FM
9 = 40 KHZ +/- 0.6 HZ
10 = 4.8 V SDA
11 = 4.8 V SCL
12 = GND
13 = 1.0 V to 5.8 V FM
14 = 2.0 V
15 = N.C.
16 = 7.9 V

6005 TEA 5581

1 = 3.5 V
2 = 1.6 V
3 = 5.0 V mono
4 = 1.5 V signal
5 = GND
6 = 0.0 V mono
7 = 1.3 V FM stereo
8 = 1.7 V FM stereo MP-6
9 = 7.5 V AM
10 = 5.0 V rad mute on
11 = 0.0 V rad mute off
12 = 3.4 V
13 = 3.4 V
14 = 1.5 V
15 = 2.1 V
16 = 3.4 V

6006 TD 7784

1 = 7.8 V
2 = 2.7 V >>
3 = 0.0 V eject
4 = N.C.
5 = 2.2 V
6 = 2.2 V
7 = 2.2 V
8 = GND
9 = 2.2 V
10 = N.C.
11 = 2.2 V
12 = 2.2 V
13 = 2.2 V
14 = N.C.
15 = N.C.
16 = 2.7 V

6007 TMP 47C42i

13 = 5.0 V eject; >> <<
14 = 0.0 V >
15 = 0.0 V ind stereo on
17 = 0.0 V reset on
19 = 4.3 V >> <<
20 = 0.0 V loud on
23 = 0.0 V manual search
27 bleep
28 = 5.0 V main mute off
29 = 5.0 V rad mute on
30 = 5.0 V mono on
39 = 0.0 V cass mute off
0.0 V dx FM+AST
4.5 V loc FM+AST
0.0 V main mute on
0.0 V rad mute off
0.0 V mono off
0.0 V cass mute on
5.1 V <
5.0 V ind stereo off
5.0 V reset off
0.0 V eject
info on
1.4 V loud off
info off

6010 TDA 1518

1 = 2.1 V
2 = 2.1 V
3 = GND
4 = 2.1 V
5 = 7.6 V
6 = 13.5 V
7 = GND
8 = 13.5 V
9 = 7.5 V
10 = 14.4 V
11 = 14.4 V
12 = 7.6 V
13 = 2.1 V

1060 IAC THIFI

1 = N.C.
2 = 2.5 V
3 = N.C.
4 = 4.3 V signal
5 = 4.0 V
6 = 7.7 V
7 = 8.1 V
8 = GND
0.0 V no signal

7001 BF 992 (chip)

1 = 3.5 V (s)
2 = 7.8 V (d)
3 = 5.5 V (g2)
4 = 3.8 V (g1)

7007 BC 558

e = 8.2 V
b = 7.4 V
c = 0.0 V AM
8.1 V FM

7019 BC 547

e = GND
b = 0.6 V
c = 0.1 V >> <<

7040 BC547

e = 5.1 V
b = 5.8 V
c = 14.4 V

7005 BC 547

e = GND
b = 0.0 V manual search
0.0 V dx FM + AST
0.7 V loc FM + AST
c = 5.5 V FM

7014/15 BC 547

e = GND
b = 0.6 V loud off
0.0 V loud on
c = 0.0 V

7030 BC 547

e = GND
b = 0.7 V reset on
0.0 V reset off
c = 5.0 V reset off
0.0 V reset on

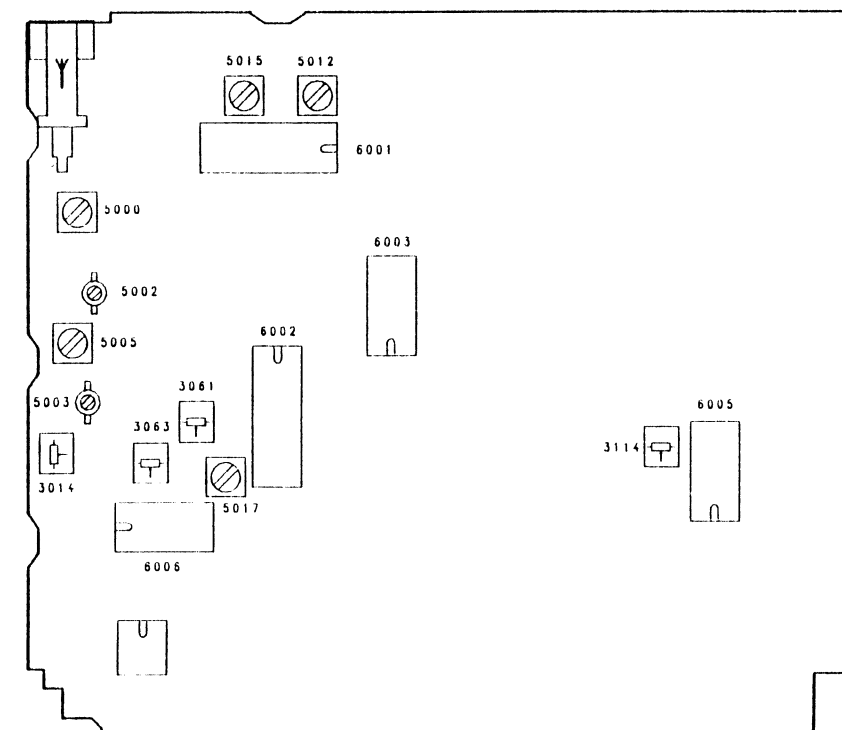
7043 BD 939 F

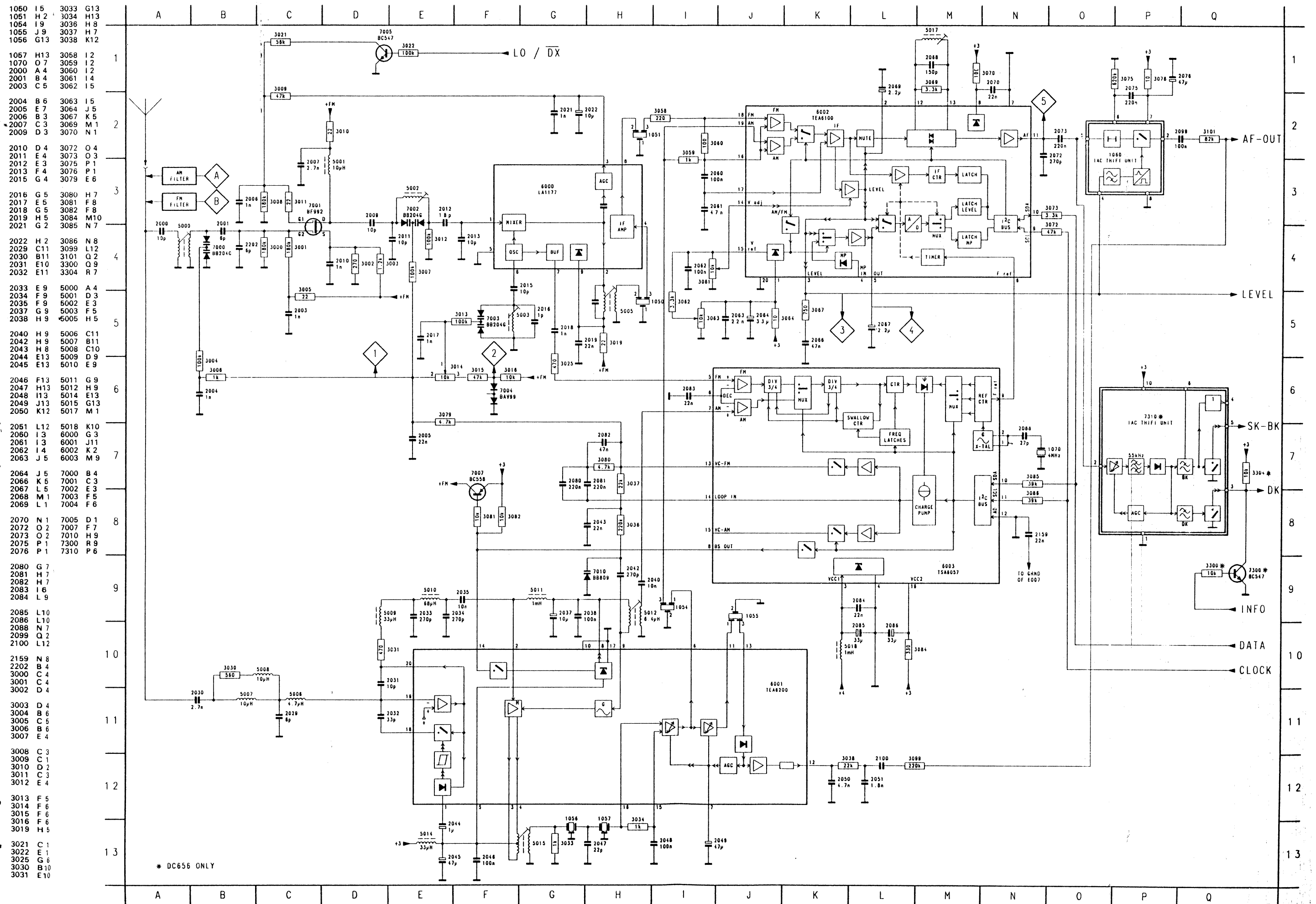
e = 8.2 V
b = 8.9 V
c = 14.4 V

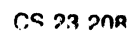
7044 BC 547

e = 5.1 V
b = 5.8 V
c = 14.4 V

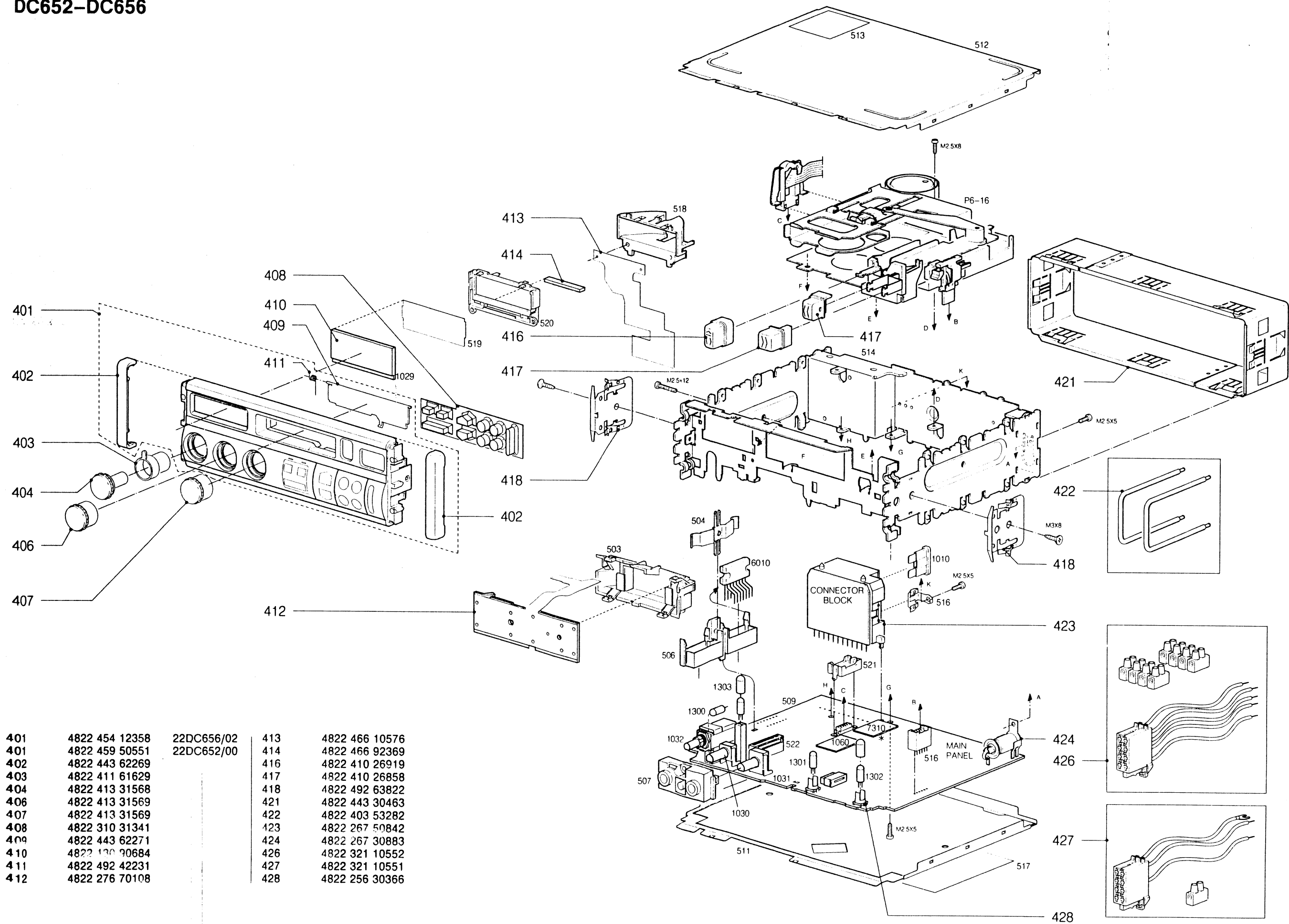
ADJUSTMENT	SK					
FM OSCILLATOR	FM	87,5MHz unmodulated	B	P1 (87,5MHz)	5003	1 0V±50mV 2
FM-IF	FM	87,5MHz unmodulated	B	P1 (87,5MHz)	5005	3 MAX DC
DETECTOR	FM	93MHz 100µV	B	P2 (93MHz)	5017	MIN DC (6002) 11 and 15 ≤ 200mV
FM-RF	FM	87,5MHz unmodulated	B	P1 (87,5MHz)	5000	3 MAX DC
		93MHz 100µV		P2 (93MHz)	5002	
		104MHz unmodulated		P3 (104MHz)	3014	
α-3dB	FM	93MHz 1mV ΔF=22,5kHz Fmod=1kHz	B	P2 (93MHz)		5 0dB (775mV)
		93MHz 15µV ΔF=22,5kHz Fmod=1kHz			3061	5 -3dB
VCO STEREO DECODER	FM	no signal			3114	6 via 100kΩ 228kHz±0,5kHz
AM OSCILLATOR	PO	531kHz modulated	A	531kHz	5012	7 8 MAX AC
AM-IF	PO	990kHz modulated	A	P1 (990kHz)	5015	7 8 MAX AC
AM SEARCH LEVEL	PO	990kHz 70µV unmodulated	A	P1 (990kHz)	3063	4 1V6 DC±0,1












DC652-DC656








401	4822 454 12358	22DC656/02	413	4822 466 10576
401	4822 459 50551	22DC652/00	414	4822 466 92369
402	4822 443 62269		416	4822 410 26919
403	4822 411 61629		417	4822 410 26858
404	4822 413 31568		418	4822 492 63822
406	4822 413 31569		421	4822 443 30463
407	4822 413 31569		422	4822 403 53282
408	4822 310 31341		423	4822 267 50842
409	4822 443 62271		424	4822 267 30883
410	4822 130 90684		426	4822 321 10552
411	4822 492 42231		427	4822 321 10551
412	4822 276 70108		428	4822 256 30366



* ONLY 22DC656

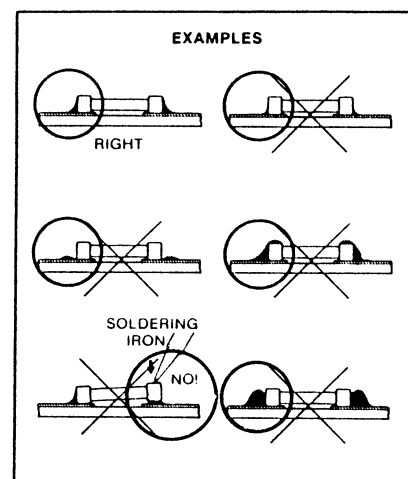
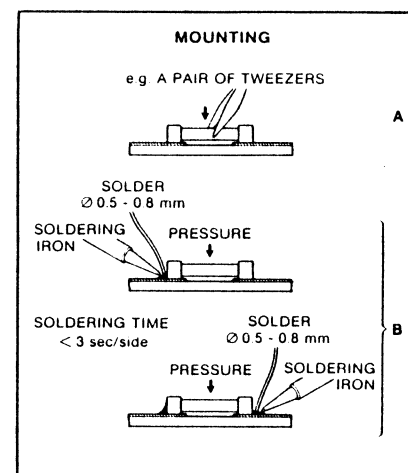
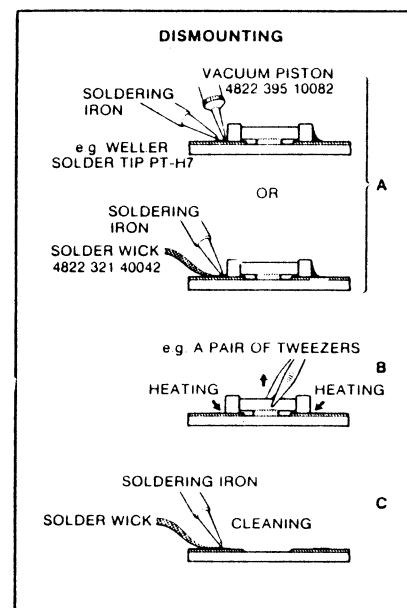
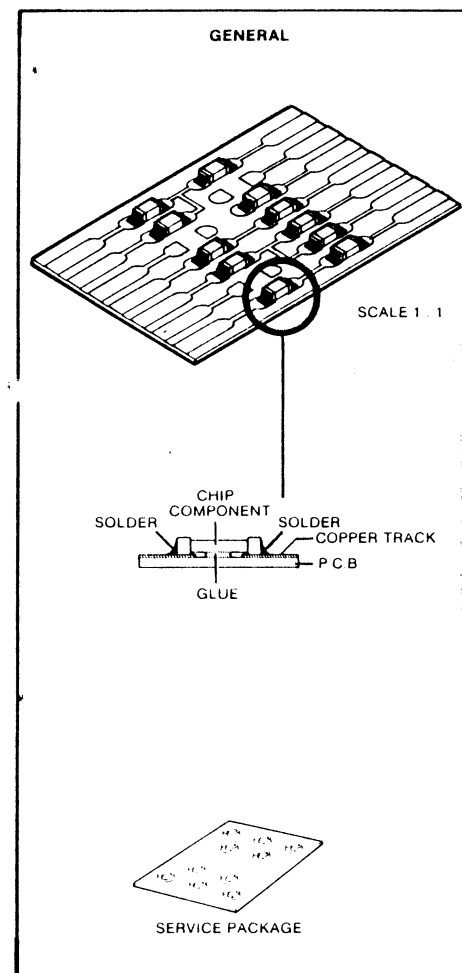
				
2001 4822 126 10205 6pF 0.5pF NPO 0805	2131 5322 122 32268 470pF 5% NPO 0805	3000 4822 116 90443 180k 5% 0.1W	3137 4822 111 91507 82Ω 5% 0.1W	5000 4822
2002 4822 126 10205 6pF 0.5pF NPO 0805	2132 4822 124 22403 10μF 20% 16V	3001 4822 116 90443 180k 5% 0.1W	3138 4822 111 91534 5k6 5% 0.06W	5001 4822
2003 4822 122 33178 1nF 20% 0805	2133 5322 122 32268 470pF 5% NPO 0805	3002 4822 116 80882 270Ω 5% 0.1W	3139 4822 111 91534 5k6 5% 0.06W	5002 4822
2004 4822 122 33178 1nF 20% 0805	2134 5322 122 32268 470pF 5% NPO 0805	3003 4822 116 80877 1k2 5% 0.1W	3140 4822 111 91507 82k 5% 0.1W 0805	5003 4822
2005 4822 122 33555 22nF 10% NPO 0805	2136 4822 124 40272 33μF20% 16V	3004 4822 111 91518 100k 5% 0.1W	3141 4822 116 80907 1M 5%	5005 4822
2006 4822 122 33178 1nF 20% 0805	2138 4822 121 41876 220nF 20% 63V	3005 4822 116 90467 22Ω 5% 0.1W	3142 4822 116 90446 470Ω 5% 0.1W	5006 4822
2010 4822 122 33178 1nF 20% 0805	2140 4822 124 40272 33μF20% 16V	3007 4822 111 91518 100k 5% 0.1W	3143 4822 111 90182 390k 2% 0.25W	5007 4822
2012 5322 122 32965 18pF 5% NPO 0805	2141 4822 121 41876 220nF 20% 63V	3008 4822 116 90443 180k 5% 0.1W	3145 4822 111 91526 3k3 5% 0.1W	5008 4822
2016 4822 122 33634 1pF 0.25pF 0805	2143 4822 124 40272 33μF20% 16V	3010 4822 116 90467 22Ω 5% 0.1W	3150 4822 111 91517 10k 5% 0.1W	5009 4822
2017 4822 122 33178 1nF 20% 0805	2150 4822 124 22412 2200μF 20% 16V	3011 4822 116 90467 22Ω 5% 0.1W	3151 4822 111 91517 10k 5% 0.1W	5010 4822
2018 4822 122 33178 1nF 20% 0805	2151 4822 122 33177 10nF 20% 50V	3012 4822 111 91518 100k 5% 0.1W	3155 4822 111 91518 100k 5% 0.1W	5011 4822
2019 4822 122 33555 22nF 10% 0805	2152 4822 124 41754 100nF20% 5.5V	3013 4822 111 91518 100k 5% 0.1W	3156 4822 111 91518 100k 5% 0.1W	5012 4822
2021 4822 122 33178 1nF 20% 0805	2153 4822 122 33555 22nF10%	3014 4822 100 20166 10k 30%LIN 0.1W	3165 4822 111 91518 100k 5% 0.1W	5014 4822
2022 4822 124 22403 10μF 20% 16V	2154 4822 124 41756 220μF20% 10V	3015 5322 116 90216 47k 5% 0.06W	3166 5322 116 90216 47k 5% 0.06W	5015 4822
2029 4822 126 10205 6pF 0.5pF NPO 0805	2155 4822 124 40244 2.2μF20% 63V	3016 4822 111 91517 10k 5% 0.1W	3167 4822 116 90441 100Ω 5% 0.1W	5017 4822
2032 4822 122 33215 33pF 5% NPO 0805	2156 4822 124 40244 2.2μF20% 63V	3019 4822 116 90467 22Ω 5% 0.1W	3170 4822 111 91532 4k7 5% 0.06W	5018 4822
2033 4822 122 33216 270pF 5% NPO 0805	2157 4822 122 33215 33pF 5% NPO 0805	3021 4822 111 91535 56k 5% 0.06W	3171 4822 111 91516 1k 5% 0.1W	5020 4822
2034 4822 122 33216 270pF 5% NPO 0805	2158 4822 122 33215 33pF 5% NPO 0805	3025 4822 116 90446 470Ω 5% 0.1W	3172 4822 111 91516 1k 5% 0.1W	
2035 4822 122 33177 10nF 20% 0805	2159 4822 122 33555 22nF10%	3030 4822 111 91533 560Ω 5% 0.06W	3173 4822 116 90446 470Ω 5% 0.1W	
2037 4822 124 40248 10μF20% 63V	2160 4822 122 33178 1nF 20% 50V	3031 4822 116 90446 470Ω 5% 0.1W	3174 4822 116 90441 100Ω 5% 0.1W	
2040 4822 122 33177 10nF 20% 50V	2164 4822 124 40272 33μF20% 16V	3033 4822 111 91516 1k 5% 0.1W	3180 4822 111 91521 18k 5% 0.1W 0805	
2042 4822 122 33216 270pF 5% 50V	2180 4822 124 40272 33 μF 20% 16V	3034 4822 111 91516 1k 5% 0.1W	3181 4822 116 81382 12k 5% 0.1W 0805	
2043 4822 122 33555 22nF10%	2181 4822 122 33177 10nF 10% 0805	3036 4822 116 80881 220k 5% 0.1W	3182 4822 116 90447 470k 5% 0.1W 0805	
2044 4822 124 40242 1μF20% 63V	2182 4822 122 33177 10nF 10% 0805	3058 4822 116 90339 220Ω 5%	3183 4822 111 91518 100k 5% 0.1W 0805	
2045 4822 124 41506 47μF 20% 16V	2200 4822 124 41506 47μF 20% 16V	3060 4822 116 90441 100Ω 5% 0.1W	3184 4822 111 91518 100k 5% 0.1W 0805	
2047 4822 122 33213 22pF 5% NPO 0805	2202 4822 122 33178 1nF 20% 50V	3061 4822 100 20166 10k 30%LIN 0.1W	3185 4822 116 80877 1k2 5% 0.1W 0805	
2049 4822 124 41506 47μF 20% 16V	2204 4822 122 33178 1nF 20% 50V	3062 4822 111 91526 3k3 5% 0.1W	3201 4822 111 91518 100k 5% 0.1W	
2050 4822 122 33337 4.7nF 20%	2207 4822 124 22411 1000μF 20% 10V	3063 4822 100 20166 10k 30%LIN 0.1W	3239 4822 116 90462 4Ω7 5% 0.1W	
2051 4822 122 33219 1.8nF 10% 0805	2208 4822 124 22411 1000μF 20% 10V	3064 4822 116 90457 10Ω 5% 0.1W	3241 4822 116 90462 4Ω7 5% 0.1W	
2060 4822 122 33104 100nF10% 63V	2209 4822 124 41506 47μF 20% 16V	3067 4822 116 80888 750Ω 5% 0.1W	3300 4822 111 91517 10k 5% 0.1W	
2061 4822 122 33211 47nF10% 63V	2210 4822 124 41506 47μF 20% 16V	3069 4822 111 91526 3k3 5% 0.1W	3301 4822 111 91517 10k 5% 0.1W	
2062 4822 122 33104 100nF10% 63V	2239 4822 122 33337 4.7nF 20%	3070 4822 116 90457 10Ω 5% 0.1W	3302 4822 111 91517 10k 5% 0.1W	
2063 4822 122 33555 22nF 10% 0805	2241 4822 122 33337 4.7nF 20%zl	3072 5322 116 90216 47k 5% 0.06W	3303 4822 111 91517 10k 5% 0.1W	
2064 4822 124 40272 33μF20% 16V		3073 4822 111 91526 3k3 5% 0.1W	3304 4822 111 91517 10k 5% 0.1W	
2067 4822 124 40244 2.2μF20% 63V		3075 4822 111 90213 620k 2% 0.25W	3305 4822 111 91534 5k6 5% 0.06W	
2068 4822 122 33338 150pF 5% 0805		3077 4822 111 91517 10k 5% 0.1W	3310 4822 111 91518 100k 5% 0.1W	
2069 4822 124 40244 2.2μF20% 63V		3078 4822 111 91534 5k6 5% 0.06W	4001 4822 111 90163 jumper	
2070 4822 122 33555 22nF10%		3080 4822 111 91532 4k7 5% 0.06W	4007 4822 111 90163 jumper	
2072 4822 122 33216 270pF 5% 50V		3082 4822 111 91517 10k 5% 0.1W		
2073 4822 121 41876 220nF 20% 63V		3099 4822 116 80881 220k 5% 0.1W		
2075 4822 121 41876 220nF 20% 63V		3101 4822 111 91507 82k 5% 0.1W 0805		
2076 4822 124 41506 47μF 20% 16V		3103 4822 111 91516 1k 5% 0.1W		
2080 4822 122 32916 220nF20% 50V		3104 4822 116 80887 68Ω 5% 0.1W		
2081 4822 122 32916 220nF20% 50V		3107 4822 111 91532 4k7 5% 0.06W		
2083 4822 122 33555 22nF10%		3108 4822 111 91518 100k 5% 0.1W		
2084 4822 122 33555 22nF10%		3109 4822 111 91511 2M2 5% 0.1W		
2085 4822 124 40272 33μF20% 16V		3110 5322 116 90216 47k 5% 0.06W		
2086 4822 124 40272 33μF20% 16V		3111 4822 116 80881 220k 5% 0.1W		
2088 4822 122 33214 27pF 5% NPO 0805		3112 4822 116 90443 180k 5% 0.1W		
2100 4822 122 33555 22nF10%		3113 4822 111 91498 15k 5% 0.1W		
2102 4822 124 41554 220μF 20% 10V		3114 4822 100 20166 10k 30%LIN 0.1W		
2103 4822 121 41877 330nF10% 63V		3115 4822 111 91532 4k7 5% 0.06W		
2104 4822 121 41877 330nF10% 63V		3116 4822 111 91518 100k 5% 0.1W		
2106 4822 122 33177 10nF 20% 50V		3117 4822 111 91511 2M2 5% 0.1W		
2110 4822 122 33555 22nF10%		3118 5322 116 90216 47k 5% 0.06W		
2113 4822 122 33177 10nF 20% 50V		3123 4822 111 91517 10k 5% 0.1W		
2116 4822 121 41876 220nF 20% 63V		3126 4822 111 91534 5k6 5% 0.06W		
2117 4822 121 41876 220nF 20% 63V		3127 4822 111 91534 5k6 5% 0.06W		
2118 4822 122 33893 18nF10% 63V		3130 4822 111 91517 10k 5% 0.1W		
2119 4822 122 33893 18nF10% 63V		3133 5322 116 90216 47k 5% 0.06W		
2130 5322 122 32268 470pF 5% NPO 0805		3134 4822 111 90182 390k 2% 0.25W		

5% NPO 0805
20% 16V
5% NPO 0805
5% NPO 0805
20% 16V
20% 63V
20% 16V
20% 63V
20% 16V
IF 20% 16V
20% 50V
20% 5.5V
10%
20% 10V
20% 63V
20% 63V
5% NPO 0805
5% NPO 0805
0%
0% 50V
20% 16V
20% 16V
10% 0805
10% 0805
20% 16V
0% 50V
0% 50V
IF 20% 10V
IF 20% 10V
20% 16V
20% 16V
20%
20%zl

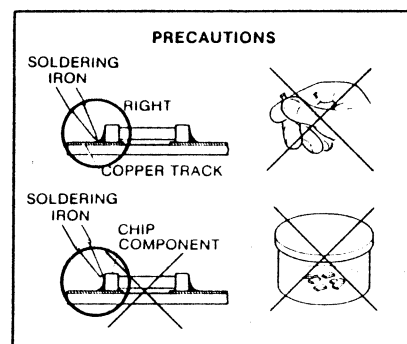
					
3000	4822 116 90443	180k 5% 0.1W	3137	4822 111 91507	82Ω 5% 0.1W
3001	4822 116 90443	180k 5% 0.1W	3138	4822 111 91534	5k6 5% 0.06W
3002	4822 116 80882	270Ω 5% 0.1W	3139	4822 111 91534	5k6 5% 0.06W
3003	4822 116 80877	1k2 5% 0.1W	3140	4822 111 91507	82k 5% 0.1W 0805
3004	4822 111 91518	100k 5% 0.1W	3141	4822 116 80907	1M 5%
3005	4822 116 90467	22Ω 5% 0.1W	3142	4822 116 90446	470Ω 5% 0.1W
3007	4822 111 91518	100k 5% 0.1W	3143	4822 111 90182	390k 2% 0.25W
3008	4822 116 90443	180k 5% 0.1W	3145	4822 111 91526	3k3 5% 0.1W
3010	4822 116 90467	22Ω 5% 0.1W	3150	4822 111 91517	10k 5% 0.1W
3011	4822 116 90467	22Ω 5% 0.1W	3151	4822 111 91517	10k 5% 0.1W
3012	4822 111 91518	100k 5% 0.1W	3155	4822 111 91518	100k 5% 0.1W
3013	4822 111 91518	100k 5% 0.1W	3156	4822 111 91518	100k 5% 0.1W
3014	4822 100 20166	10k 30%LIN 0.1W	3165	4822 111 91518	100k 5% 0.1W
3015	5322 116 90216	47k 5% 0.06W	3166	5322 116 90216	47k 5% 0.06W
3016	4822 111 91517	10k 5% 0.1W	3167	4822 116 90441	100Ω 5% 0.1W
3019	4822 116 90467	22Ω 5% 0.1W	3170	4822 111 91532	4k7 5% 0.06W
3021	4822 111 91535	56k 5% 0.06W	3171	4822 111 91516	1k 5% 0.1W
3025	4822 116 90446	470Ω 5% 0.1W	3172	4822 111 91516	1k 5% 0.1W
3030	4822 111 91533	560Ω 5% 0.06W	3173	4822 116 90446	470Ω 5% 0.1W
3031	4822 116 90446	470Ω 5% 0.1W	3174	4822 116 90441	100Ω 5% 0.1W
3033	4822 111 91516	1k 5% 0.1W	3180	4822 111 91521	18k 5% 0.1W 0805
3034	4822 111 91516	1k 5% 0.1W	3181	4822 116 81382	12k 5% 0.1W 0805
3036	4822 116 80881	220k 5% 0.1W	3182	4822 116 90447	470k 5% 0.1W 0805
3058	4822 116 90339	220Ω 5%	3183	4822 111 91518	100k 5% 0.1W 0805
3060	4822 116 90441	100Ω 5% 0.1W	3184	4822 111 91518	100k 5% 0.1W 0805
3061	4822 100 20166	10k 30%LIN 0.1W	3185	4822 116 80877	1k2 5% 0.1W 0805
3062	4822 111 91526	3k3 5% 0.1W	3201	4822 111 91518	100k 5% 0.1W
3063	4822 100 20166	10k 30%LIN 0.1W	3239	4822 116 90462	4Ω7 5% 0.1W
3064	4822 116 90457	10Ω 5% 0.1W	3241	4822 116 90462	4Ω7 5% 0.1W
3067	4822 116 80888	750Ω 5% 0.1W	3300	4822 111 91517	10k 5% 0.1W
3069	4822 111 91526	3k3 5% 0.1W	3301	4822 111 91517	10k 5% 0.1W
3070	4822 116 90457	10Ω 5% 0.1W	3302	4822 111 91517	10k 5% 0.1W
3072	5322 116 90216	47k 5% 0.06W	3303	4822 111 91517	10k 5% 0.1W
3073	4822 111 91526	3k3 5% 0.1W	3304	4822 111 91517	10k 5% 0.1W
3075	4822 111 90213	620k 2% 0.25W	3305	4822 111 91534	5k6 5% 0.06W
3077	4822 111 91517	10k 5% 0.1W	3310	4822 111 91518	100k 5% 0.1W
3078	4822 111 91534	5k6 5% 0.06W	4001	4822 111 90163	jumper
3080	4822 111 91532	4k7 5% 0.06W	4007	4822 111 90163	jumper
3082	4822 111 91517	10k 5% 0.1W			
3099	4822 116 80881	220k 5% 0.1W			
3101	4822 111 91507	82k 5% 0.1W 0805			
3103	4822 111 91516	1k 5% 0.1W			
3104	4822 116 80887	68Ω 5% 0.1W			
3107	4822 111 91532	4k7 5% 0.06W			
3108	4822 111 91518	100k 5% 0.1W			
3109	4822 111 91511	2M2 5% 0.1W			
3110	5322 116 90216	47k 5% 0.06W			
3111	4822 116 80881	220k 5% 0.1W			
3112	4822 116 90443	180k 5% 0.1W			
3113	4822 111 91498	15k 5% 0.1W			
3114	4822 100 20166	10k 30%LIN 0.1W			
3115	4822 111 91532	4k7 5% 0.06W			
3116	4822 111 91518	100k 5% 0.1W			
3117	4822 111 91511	2M2 5% 0.1W			
3118	5322 116 90216	47k 5% 0.06W			
3123	4822 111 91517	10k 5% 0.1W			
3126	4822 111 91534	5k6 5% 0.06W			
3127	4822 111 91534	5k6 5% 0.06W			
3130	4822 111 91517	10k 5% 0.1W			
3133	5322 116 90216	47k 5% 0.06W			
3134	4822 111 90182	390k 2% 0.25W			

					
5000	4822 156 10666	RF	7030	4822 130 44257	BC547
5001	4822 152 20677	10μH	7040	4822 130 44257	BC547
5002	4822 157 53767	FM	7041	4822 130 34173	BZX55-C5V6
5003	4822 157 52227	RF	7042	4822 130 30862	BZX55-C9V1
5005	4822 157 60172	IF-FM	7043	4822 130 42681	BD939F
5006	4822 157 60122	4.7μH	7044	4822 130 44257	BC547
5007	4822 152 20677	10μH	7052	4822 130 34048	BZV86-2V6
5008	4822 152 20677	10μH	7300	4822 130 44257	BC547
5009	4822 152 20678	33μH10%	7301	4822 130 44257	BC547
5010	4822 152 20679	68μH	7302	4822 130 44257	BC547
5011	4822 157 50975	1 mH	7305	4822 130 41845	ON796
5012	4822 156 11085	AM	7310	4822 214 51674	
5014	4822 152 20678	33μH10%			
5015	4822 156 11084	IF-AM			
5017	4822 156 11081	1.47μH			
5018	4822 157 50975	1 mH			
5020	4822 152 20681				

					
6000	4822 209 73069	LA1177	1010	4822 252 51097	2.5A (T)
6001	4822 209 72247	TEA6200/V1	1030	4822 101 90188	BALANCE
6002	4822 209 73507	TEA6100/N3	1031	4822 101 90189	TONE
6003	4822 209 72248	TSA6057/C5 B	1032	4822 102 20096	50k 20%
6005	4822 209 73712	TEA5581/N4	1050	4822 242 72583	SFE 10.7MS3-A-TF20
6006	4822 209 71871	TA7784P	1051	4822 242 72583	SFE 10.7MS3-A-TF20
6007	4822 209 61153	TMP47C421AF-8507	1054	4822 242 72582	SFE10.7MS3-D-TF20
6010	4822 209 72249	TDA1518Q/N4	1055	4822 242 72582	SFE10.7MS3-D-TF20
7000	5322 130 34825	BB204G	1056	4822 242 72076	10.7 MHz
7001	4822 130 60515	BF992	1057	4822 242 72076	10.7 MHz
7002	5322 130 34825	BB204G	1060	4822 214 51676	IAC-7
7003	5322 130 34825	BB204G	1070	4822 242 71874	4.000 000 MHz
7004	5322 130 34337	BAV99	1071	4822 242 72579	CSA4.00MGTF
7005	4822 130 44257	BC547	1300	4822 134 40932	80mA,ORANGE
7007	5322 130 41983	BC858B	1301	4822 134 40952	
7007	4822 130 40941	BC558	1302	4822 134 40952	
7008	5322 130 41983	BC858B	1303	4822 134 40938	80mA-16V WHITE
7009	5322 130 41983	BC858B			
7010	5322 130 31684	BB809			
7012	4822 130 30621	1N4148			
7017	4822 130 34174	BZX55-C4V7			
7018	4822 130 30621	1N4148			
7019	4822 130 44257	BC547			
7020	5322 130 30684	1N4002			
7021	4822 130 34174	BZX55-C4V7			
7022	5322 130 34337	BAV99			
7023	4822 130 30621	1N4148			
7024	4822 130 30621	1N4148			



27 012C12



Carbon film 0.2 W 70°C 5%	Ceramic plate Tuning ≤ 120 pF NP.0 2% Others -20/+80%	*a = 2.5 V b = 4 V c = 6.3 V d = 10 V e = 16 V f = 25 V g = 40 V h = 63 V j = 100 V l = 125 V m = 150 V n = 160 V q = 200 V r = 250 V s = 300 V t = 350 V u = 400 V v = 500 V w = 630 V x = 1000 V A = 1.6 V B = 6 V C = 12 V D = 15 V E = 20 V F = 35 V G = 50 V H = 75 V I = 80 V
Carbon film 0.33 W 70°C 5%	Polyester flat foil 10%	
Metal film 0.33 W 70°C 5%	Metalized polyester flat film 10%	
Carbon film 0.5 W 70°C 5%	Polyester flat foil small size (Mylar) 10%	
Carbon film 0.67 W 70°C 5%	Polysterene film/foil 1%	
Carbon film 1.15 W 70°C 5%	Tubular ceramic	
Miniature single	Subminiature tantalum ± 20%	
© Chip component		

27 037A/C

Chips 50 V NP0 S1206			Chips 0,125 W S1206			Chips 0,125 W S1206			1U
1 pF	5%	4822 122 32479	4,7 E	5%	5322 111 90376	6,8 k	2%	4822 111 90544	
1,2 pF	5%	4822 122 33013	5,1 E	5%	4822 111 90393	7,5 k	2%	4822 111 90276	
1,5 pF	5%	4822 122 31792	5,6 E	5%	4822 111 90394	8,2 k	2%	5322 111 90118	
1,8 pF	5%	4822 122 32087	6,2 E	5%	4822 111 90395	9,1 k	2%	4822 111 90373	
2,2 pF	5%	4822 122 32425	6,8 E	5%	4822 111 90254	10 k	2%	4822 111 90249	
3,3 pF	5%	4822 122 32079	7,5 E	5%	4822 111 90396	11 k	2%	4822 111 90337	
3,9 pF	5%	4822 122 32081	8,2 E	5%	4822 111 90397	12 k	2%	4822 111 90253	
4,7 pF	5%	4822 122 32082	9,1 E	5%	4822 111 90398	13 k	2%	4822 111 90509	
5,6 pF	5%	4822 122 32506	10 E	2%	5322 111 90095	15 k	2%	4822 111 90196	
6,8 pF	5%	4822 122 32507	11 E	2%	4822 111 90338	16 k	2%	4822 111 90346	
8,2 pF	5%	4822 122 32083	12 E	2%	4822 111 90341	18 k	2%	4822 111 90238	
10 pF	5%	4822 122 31971	13 E	2%	4822 111 90343	20 k	2%	4822 111 90349	
12 pF	5%	4822 122 32139	15 E	2%	4822 111 90344	22 k	2%	4822 111 90251	
15 pF	5%	4822 122 32504	16 E	2%	4822 111 90347	24 k	2%	4822 111 90512	
18 pF	5%	4822 122 31769	18 E	2%	5322 111 90139	27 k	2%	4822 111 90542	
22 pF	10%	4822 122 31837	20 E	2%	4822 111 90352	30 k	2%	4822 111 90216	
27 pF	5%	4822 122 31966	22 E	2%	4822 111 90186	33 k	2%	5322 111 90267	
33 pF	5%	4822 122 31756	24 E	2%	4822 111 90355	36 k	2%	4822 111 90514	
39 pF	5%	4822 122 31972	27 E	2%	5322 111 90105	39 k	2%	5322 111 90108	
47 pF	5%	4822 122 31772	30 E	2%	4822 111 90356	43 k	2%	4822 111 90363	
56 pF	5%	4822 122 31774	33 E	2%	4822 111 90357	47 k	2%	4822 111 90543	
68 pF	5%	4822 122 31961	36 E	2%	4822 111 90359	51 k	2%	5322 111 90274	
82 pF	10%	4822 122 31839	39 E	2%	4822 111 90361	56 k	2%	4822 111 90573	
100 pF	5%	4822 122 31765	43 E	2%	5322 116 90125	62 k	2%	5322 111 90275	
120 pF	5%	4822 122 31766	47 E	2%	4822 111 90217	68 k	2%	4822 111 90202	
150 pF	5%	4822 122 31767	51 E	2%	4822 111 90365	75 k	2%	4822 111 90574	
180 pF	2%	4822 122 31794	56 E	2%	4822 111 90239	82 k	2%	4822 111 90575	
220 pF	5%	4822 122 31965	62 E	2%	4822 111 90367	91 k	2%	5322 111 90277	
270 pF	5%	4822 122 32142	68 E	2%	4822 111 90203	100 k	2%	4822 111 90214	
330 pF	10%	4822 122 31642	75 E	2%	4822 111 90371	110 k	2%	5322 111 90269	
390 pF	5%	4822 122 31771	82 E	2%	4822 111 90124	120 k	2%	4822 111 90568	
470 pF	5%	4822 122 31727	91 E	2%	4822 111 90375	130 k	2%	4822 111 90511	
560 pF	5%	4822 122 31773	100 E	2%	5322 111 90091	150 k	2%	5322 111 90099	
680 pF	5%	4822 122 31775	110 E	2%	4822 111 90335	160 k	2%	5322 111 90264	
820 pF	5%	4822 122 31974	120 E	2%	4822 111 90339	180 k	2%	4822 111 90565	
1 nF	10%	5322 122 31647	130 E	2%	4822 111 90164	200 k	2%	4822 111 90351	
1,2 nF	5%	4822 122 31807	150 E	2%	5322 111 90098	220 k	2%	4822 111 90197	
1,5 nF	10%	4822 122 31781	160 E	2%	4822 111 90345	240 k	2%	4822 111 90215	
1,8 nF	10%	4822 122 32153	180 E	2%	5322 111 90242	270 k	2%	4822 111 90302	
2,2 nF	10%	4822 122 31644	200 E	2%	4822 111 90348	300 k	2%	5322 111 90266	
2,7 nF	10%	4822 122 31783	220 E	2%	4822 111 90178	330 k	2%	4822 111 90513	
3,3 nF	10%	4822 122 31969	240 E	2%	4822 111 90353	360 k	2%	4822 111 90515	
3,9 nF	10%	4822 122 32566	270 E	2%	4822 111 90154	390 k	2%	4822 111 90182	
4,7 nF	10%	4822 122 31784	300 E	2%	4822 111 90156	430 k	2%	4822 111 90168	
5,6 nF	10%	4822 122 31916	330 E	2%	5322 111 90106	470 k	2%	4822 111 90161	
6,8 nF	10%	4822 122 31976	360 E	1%	4822 111 90288	510 k	2%	4822 111 90364	
10 nF	10%	4822 122 31728	360 E	2%	4822 111 90358	560 k	2%	4822 111 90169	
12 nF	10%	5322 122 31648	390 E	2%	5322 111 90138	620 k	2%	4822 111 90213	
15 nF	10%	4822 122 31782	430 E	2%	4822 111 90362	680 k	2%	4822 111 90368	
18 nF	10%	4822 122 31759	470 E	2%	5322 111 90109	750 k	2%	4822 111 90369	
22 nF	10%	4822 122 31797	510 E	2%	4822 111 90245	820 k	2%	4822 111 90205	
27 nF	10%	4822 122 32541	560 E	2%	5322 111 90113	910 k	2%	4822 111 90374	
33 nF	10%	4822 122 31981	620 E	2%	4822 111 90366	1 M	2%	4822 111 90252	
47 nF	10%	4822 122 32542	680 E	2%	4822 111 90162	1,1 M	5%	4822 111 90408	
56 nF	10%	4822 122 32183	750 E	2%	5322 111 90306	1,2 M	5%	4822 111 90409	
100 nF	10%	4822 122 31947	820 E	2%	4822 111 90171	1,3 M	5%	4822 111 90411	
180 nF	10%	4822 122 32915	910 E	2%	4822 111 90372	1,5 M	5%	4822 111 90412	
220 nF	20%	4822 122 32715	1 k	2%	5322 111 90092	1,6 M	5%	4822 111 90413	
Chips 0,125 W S1206 NP0			1,1 k	2%	4822 111 90336	1,8 M	5%	4822 111 90414	
0 E	jumper	4822 111 90163	1,2 k	2%	5322 111 90096	2 M	5%	4822 111 90415	
1 E	5%	4822 111 90184	1,3 k	2%	4822 111 90244	2,2 M	5%	4822 111 90185	
1,1 E	5%	4822 111 90377	1,5 k	2%	4822 111 90151	2,4 M	5%	4822 111 90416	
1,2 E	5%	4822 111 90378	1,6 k	2%	5322 111 90265	2,7 M	5%	4822 111 90417	
1,3 E	5%	4822 111 90379	1,8 k	2%	5322 111 90101	3 M	5%	4822 111 90418	
1,5 E	5%	4822 111 90381	2 k	2%	4822 111 90165	3,3 M	5%	4822 111 90191	
1,6 E	5%	4822 111 90382	2,2 k	2%	4822 111 90245	3,6 M	5%	4822 111 90419	
1,8 E	5%	4822 111 90383	2,4 k	2%	4822 111 90289	3,9 M	5%	4822 111 90421	
2 E	5%	4822 111 90384	2,7 k	2%	4822 111 90569	4,3 M	5%	4822 111 90422	
2,2 E	5%	5322 111 90104	3 k	2%	4822 111 90198	4,7 M	5%	4822 111 90423	
2,4 E	5%	4822 111 90385	3,3 k	2%	4822 111 90157	5,1 M	5%	4822 111 90424	
2,7 E	5%	4822 111 90386	3,6 k	2%	5322 111 90107	5,6 M	5%	4822 111 90425	
3 E	5%	4822 111 90387	3,9 k	2%	4822 111 90571	6,2 M	5%	4822 111 90426	
3,3 E	5%	4822 111 90388	4,3 k	2%	4822 111 90167	6,8 M	5%	4822 111 90235	
3,6 E	5%	4822 111 90389	4,7 k	2%	5322 111 90111	7,5 M	5%	4822 111 90427	
3,9 E	5%	4822 111 90391	5,1 k	2%	5322 111 90268	8,2 M	5%	4822 111 90237	
4,3 E	5%	4822 111 90392	5,6 k	2%	4822 111 90572	9,1 M	5%	4822 111 90428	
			6,2 k	2%	4822 111 90545	10 M	5%	5322 111 91141	